

**REMARKS****Specification Amendment**

The Examiner objected to the title of the invention, requiring a new title clearly indicative of the invention to which the claims are directed. Accordingly, the title of the specification has been amended. We respectfully submit that the new title is sufficiently indicative of the claimed invention.

**Claim Status**

Claims 1-3, 5-11, and 13-18 are pending in the application. Claims 1, 5, 6, 9, 13, and 14 have been amended. Claims 4 and 12 have been canceled. Claims 17 and 18 have been added.

**Art Rejections**

The Office Action rejected claims 1-6 and 9-14 of the application under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Number 6,529,520 to Lee *et al.* ("Lee") and U.S. Patent Number 5,956,338 to Ghaibeh ("Ghaibeh"). The Office Action further rejected claims 7, 8, 15, and 16 under 35 U.S.C. § 103(a) as being unpatentable over Lee, Ghaibeh, and a publication CABLEMODEM STANDARDS FOR ADVANCED QUALITY OF SERVICE DEPLOYMENTS by Quigley ("Quigley").<sup>1</sup> We respectfully traverse these rejections.

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<sup>1</sup> Notwithstanding the discussion below, Applicant does not admit that Lee and Quigley are prior art.

The state machine recited in independent claims 1 and 9, as amended, and in new claims 17 and 18 includes a grant pending absent state in which the customer premises equipment (CPE) is polled with a unicast request slot. The Office Action cites Ghaibeh, at col. 10, lines 42-49, and Figure 13 for the disclosure of this limitation. The cited text, which describes Figure 13, is quoted below:

Referring to FIG. 13, in order to accommodate a greater number of upstream communication requests, the HEMAC 28 may periodically transmit a "block request" polling permit 220, which polls up to six different NTs 26 to allow for each to send an upstream request in a respective eleven byte reserved request slots 222. Each eleven byte reserved request slot 222 includes a five byte preamble, one byte "request size" field, a four bit "request type" field, two and one-half bytes spare and two bytes FEC information, respectively.

Ghaibeh, col. 10, lines 42-51.

Neither the quoted text nor Figure 13 discloses unicast polling. Unicast is generally understood to mean communication that takes place over a network between a single sender and a single receiver. See, for example, Webopedia technical dictionary, available at <http://www.webopedia.com>. The communication described in the quoted text takes place between the HEMAC 28 and "up to six different NTs 26." Note also that the HEMAC 26 transmits "'block request' polling permit." Thus, the communication is between the HEMAC 26 sender and a block of multiple receivers. The communication is not unicast.

To be sure, unicast is known. See, for example, Quigley, at page 41, which describes a unicast request region in each frame. But in independent claims 1 and 9, as amended, the unicast request slots are used in the grant pending absent state. Furthermore, according to the new claims 17

and 18, unicast request slots are not used in at least some other states. Not every frame includes a unicast request slot.

The state machine of independent claims 1 and 9 also includes a grant pending state. These claims also describe a transition from the grant pending state into the grant pending absent state. The transition takes place “after the customer premises equipment has sent upstream data to the base station controller in the grant pending state.” The transition was previously recited in claims 6 and 14. The Office action cites Ghaibeh’s col. 10, lines 42-49, and Figure 13 for the disclosure of this limitation.

Figure 13 illustrates “a block diagram of a preferred upstream data frame transmitted in response to a block request polling permit.” Ghaibeh, col. 4, lines 57-59. Figure 13 is not a state diagram and does not disclose the transition. Ghaibeh’s text at col. 10, lines 42-49, has been quoted and discussed above. It apparently does not include a description of the transition between the two states in issue here.

Thus, Lee, Ghaibeh, and Quigley do not teach all of the limitations of the pending claims. Moreover, the motivation to combine these references is lacking. The Office Action states that it would have been obvious to a person of ordinary skill in the art, at the time of invention, to incorporate the grant pending absent state into the contention state machine so that the data network could dynamically, adaptively, and simultaneously support multiple types of data traffic. This purported motivation is of the most general kind. It does not make obvious a particular technique used to achieve the end-result, *i.e.*, the use of a grant pending absent state within the state machine.

As the Court of Appeals for the Federal Circuit has recognized, a “general incentive does not make obvious a particular result, nor does the existence of techniques by which those efforts can be carried out.” *In re Deuel*, 51 F.3d 1551, 1559, 34 U.S.P.Q.2d 1210, 1216 (Fed. Cir. 1995). For this reason, we respectfully submit that a *prima facie* case of obviousness has not been made.

The above discussion addresses all independent claims of the application. As regards the dependent claims not specifically discussed, these claims are patentable together with their base claims and intervening claims, if any.

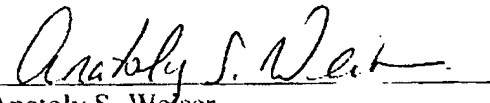
**CONCLUSION**

For the foregoing reasons, Applicant respectfully submits that all pending claims are patentable over Lee, Ghaibeh, and Quigley. To discuss any matter pertaining to the present application, the Examiner is invited to call the undersigned attorney at (858) 720-9431.

Having made an effort to bring the application in condition for allowance, a timely notice to this effect is earnestly solicited.

Respectfully submitted.

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